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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,597	09/05/2006	Tohru Yamaoka	071971-0724	3387

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EXAMINER	
LE, HUYEN D	

ART UNIT	PAPER NUMBER
2614	

MAIL DATE	DELIVERY MODE
04/08/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,597	YAMAOKA ET AL.	
	Examiner	Art Unit	
	HUYEN D. LE	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/25/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 18-32 of copending Application No. 10/576,518. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are claiming a device comprising a first or fixed film including a first electrode, a second or vibrating film including a second electrode and insulating film, and an air gap between the first film and the second film.

Claims 18-32 of copending Application No. 10/576,518 do not claim the fist insulating film and second insulating film as claimed. However, providing an insulating film between the fixed film and the vibrating film and providing an insulating film for the fixed film for an electret condenser or electret condenser formed by using a MEMS technology are known in the art.

Therefore, it would have been obvious to one skilled in the art to provide the first insulting film between the fixed film and the vibrating film and to provide the second insulating film on the fixed film for providing the electric potential and better providing a high reliable condenser microphone.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasuno et al. (US 2003/0026443).

Regarding claims 1 and 7-10, Yasuno et al. teaches a device comprising a first film (5 or 3) including a first electrode (52 or 33), a second film (3 or 5) including a second electrode (33 or 52), a first insulating film (4) formed between the first film and the second film, an air gap (8, figure 3), a second insulating film (34 or 51) formed on part of the first film, and a third insulating film (51 or 34) formed on part of the second film as claimed (also see figure 3).

Yasuno does not specifically disclose that the air gap is formed by removing part of the first insulating film (4). However, Yasuno does show the air gap (8) being formed within the first insulating film.

Therefore, it would have been obvious to one skilled in the art to provide the air gap (8) formed by removing part of the first insulating film (4) for better constructing the air gap between the first and second films.

Yasuno does not teach the construction for a MEMS device. However, it would have been obvious to one skilled in the art to provide the construction of Yasuno in the MEMS device for greater application.

Regarding claim 2, Yasuno et al. further shows the first electrode (52) that has a through hole (52A) communicating with the air gap.

Regarding claim 3, it is obvious that the second insulating film and third insulating film (34, 51) that are insulating films having tensile stress (figure 3, [0050] and [0053]).

Regarding claim 4, Yasuno et al. does not teach that the second insulating film and the third insulating film (34, 51) are silicon nitride films as claimed. However, providing the insulating material for the electret layer made of silicon nitride is known in the art.

Since Yasuno does not restrict to the material for the insulating layer (34, 51); it therefore would have been obvious to one skilled in the art to provide silicon nitride for the insulating layer (34, 51) of the Yasuno device for providing better material and electric filed between the diaphragm (3) and the conductive fixed electrode (5).

Regarding claim 5, Yasuno et al. teaches one layer for the first insulating film (4). Yasuno does not specifically teach the insulating film (4) is a lamination layer of a plurality of insulating films as claimed. However, it would have been obvious to one skilled in the art to provide a lamination layer of a plurality of insulating films made of the same material for the first insulating layer (4) for the same desired purpose of setting and adjusting the distance between the electrode layers in the device (also see [0043]).

Regarding claim 6, Yasuno et al. teaches the first film (5) and the second film (3) as claimed.

Response to Arguments

5. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yagi et al. (US 3,946,422) teaches an electret transducer having an electret of inorganic insulating material.

Chang (US 6,928,178) teaches a condenser microphone having a diaphragm (52) that includes a silicon dioxide layer (521) and a silicon nitride layer (522).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (571) 272-7502. The examiner can normally be reached on 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CURTIS KUNTZ can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HUYEN D. LE/
Primary Examiner, Art Unit 2614

HL
April 3, 2009